

Appl. No. 09/884,595
Amdt. dated Dec. 22, 2003
Reply to Office Action of Aug. 22, 2003

REMARKS/ARGUMENTS

Claims 1-14 are pending. Claims 1-5, 10, 13, and 14 have been amended to more clearly claim the present invention. No new subject matter has been added with the amendment to these claims.

New drawing, FIG. 26, has been added and the specification has been amended to reflect this addition. No new subject matter has been added with the new drawing or amendment to the specification.

A Petition for Extension of Time to extend the period for response one month, including the appropriate fee, is filed herewith.

A. Objection to Drawing

The drawings stand objected to under 37 CFR 1.83(a), as the drawings allegedly do not illustrate the second interconnection layer comprising at least one dielectric layer abutting at least one of said microelectronic device back surface, said microelectronic substrate core second surface, and said encapsulant material second surface, and at least one conductive trace disposed on said at least one dielectric layer. However, this objection is believed to be incorrect. FIGs. 18, 19 and 20 all illustrate the second interconnection layer 204' abutting the microelectronic device back surface, the microelectronic substrate core second surface, and the encapsulant material second surface.

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In specific, the specification states “A first interconnection layer 204 is formed on the microelectronic device active surfaces 116 and microelectronic substrate core first surface 106, and a second interconnection layer 204’ is formed on the microelectronic device back surfaces 118 and microelectronic substrate core first surface 108, preferably, in the manner previously discussed.” The previous discussion was with regard to the formation of interconnection layer is discussed throughout the specification as dielectric layers and conductive traces, as shown in FIG. 12.

Although the objection is respectfully believed to be without merit, in order to advance the prosecution of the present application, Applicants have included an additional drawing which is a close-up FIG. 18. All elements are shown in other figures and discussed in the specification, no new subject matter has been added with this additional drawing. Therefore, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

B. 35 U.S.C. § 112, second paragraph

Claim 8-12 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Although the drawing are believed to be sufficient and clear for one skill in the art to understand the claims, Applicants have provided an additional drawing.

Claim 10 has also been amended to clarify that at line 13 “said microelectronic die” relates to the second microelectronic die.

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Therefore, reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph rejection are respectfully requested.

C. 35 U.S.C. § 102(b)

Claims 1-3, 5-9, 13, and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,696,666 issued December 9, 1997 to Barry Miles and Glenn Gold (hereinafter “the Miles patent”) (Office Action, pages 2-6).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Independent claim 1, from which claims 2, 3, and 5-9 depend, has been amended to include the limitation of “a first interconnect layer comprising at least one dielectric layer disposed on said first microelectronic substrate core first surface and at least one conductive trace disposed on said at least one dielectric layer.” Independent claim 13, from which claim 14 depends, has been amended to include the limitation of “a first interconnection layer comprising at least one dielectric layer disposed on said encapsulation material and at least one conductive trace disposed on said at least one dielectric layer”.

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The Miles patent neither teaches nor suggests such limitations. The Office Action contends that interconnections layer, dielectric layers, etc. are taught in the Miles patent. However, the Applicants could find no such elements as defined in the present specification. Furthermore, the Office Action has pointed to elements or teaching in the Miles patent with regard to the rejection of 2, 3, and 5-9. It merely states that the elements are there. This is insufficient. The Office well knows, as set forth in Section 706 of the MPEP: “. . . The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” Furthermore, MPEP 706.02j states that “[i]t is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply.”

Therefore, as the Miles patent does not teach all of the limitations of the present claims, reconsideration and withdrawal of the Section 102(b) rejection of claims 1-3, 5-9, 13, and 14 over the Miles patent are respectfully requested.

D. 35 U.S.C. § 103(a) - Claims 1-9, 13, and 14 - the Towle reference and the Eichelberger patent

Claims 1-9, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being obvious over the U.S. Patent Application #2002/0137263 A1 by Steven Towle, John Cuendet, and Kyle Johnson (hereinafter the “Towle reference”) in combination with U.S. Patent No. 5,841,193 issued

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November 24, 1998 to Charles Eichelberger (hereinafter “the Eichelberger patent”) (Office Action, pages 6-8).

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Towle reference is not a prior art reference. It fits under no categories for prior art 35 U.S.C. § 102. Furthermore, the Towle reference and the present application are both owned by Intel Corporation and are both subject to an obligation of assignment thereto, as discussed in 35 U.S.C. § 103(c).

The Eichelberger patent alone does not teach or suggest all of the limitations of the present claims. Thus, Applicants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of claims 1-9, 13, and 14.

In view of the foregoing remarks, the Applicants request allowance of the application. Please forward further communications to the address of record. If the Examiner needs to

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contact the below-signed attorney to further the prosecution of the application, the contact number is (503) 712-1682.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert G. Winkle", is written over a horizontal line.

Robert G. Winkle
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Dated: December 22, 2003